



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

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4/6/99

**VIA TELEFAX AND
REGULAR MAIL**

April 6, 1999

REPLY TO THE ATTENTION OF

Susan Franzetti
Gardner Carton & Douglas
Suite 3400 Quaker Tower
321 North Clark Street
Chicago, Illinois 60810

Dear Susan:

Per your discussion with Brad Bradley last week, enclosed are an outline of the historic basis used to determine locations for stack emission residential yard cleanup and a map of the approximate boundaries of the cleanup zone for the stack emission residential portion of the cleanup at the NL Industries Site in Granite City, Illinois. Any areas affected by these enclosures will need to be addressed appropriately.

Please contact me at (312) 886-6609 if you have any questions concerning this letter or the enclosures.

Sincerely,

Brad Bradley, Jr.

Larry Johnson
Assistant Regional Counsel

Enclosures

cc: Dennis Reis, Quarles & Brady

EPA Region 5 Records Ctr.



257685

HISTORIC BASIS USED TO DETERMINE LOCATIONS FOR STACK EMISSION RESIDENTIAL YARD CLEANUP

EPA to date has determined the scope of stack emission residential yard remediation at the NL Industries Site in Granite City, Illinois (the Site) based on wind rose data, a 36-point grid sampling effort (1000 foot centers) in 1987, actual sampling results from over 1200 properties in the cleanup zone, and an extent of contamination study conducted by Woodward-Clyde Consultants in 1993-1994.

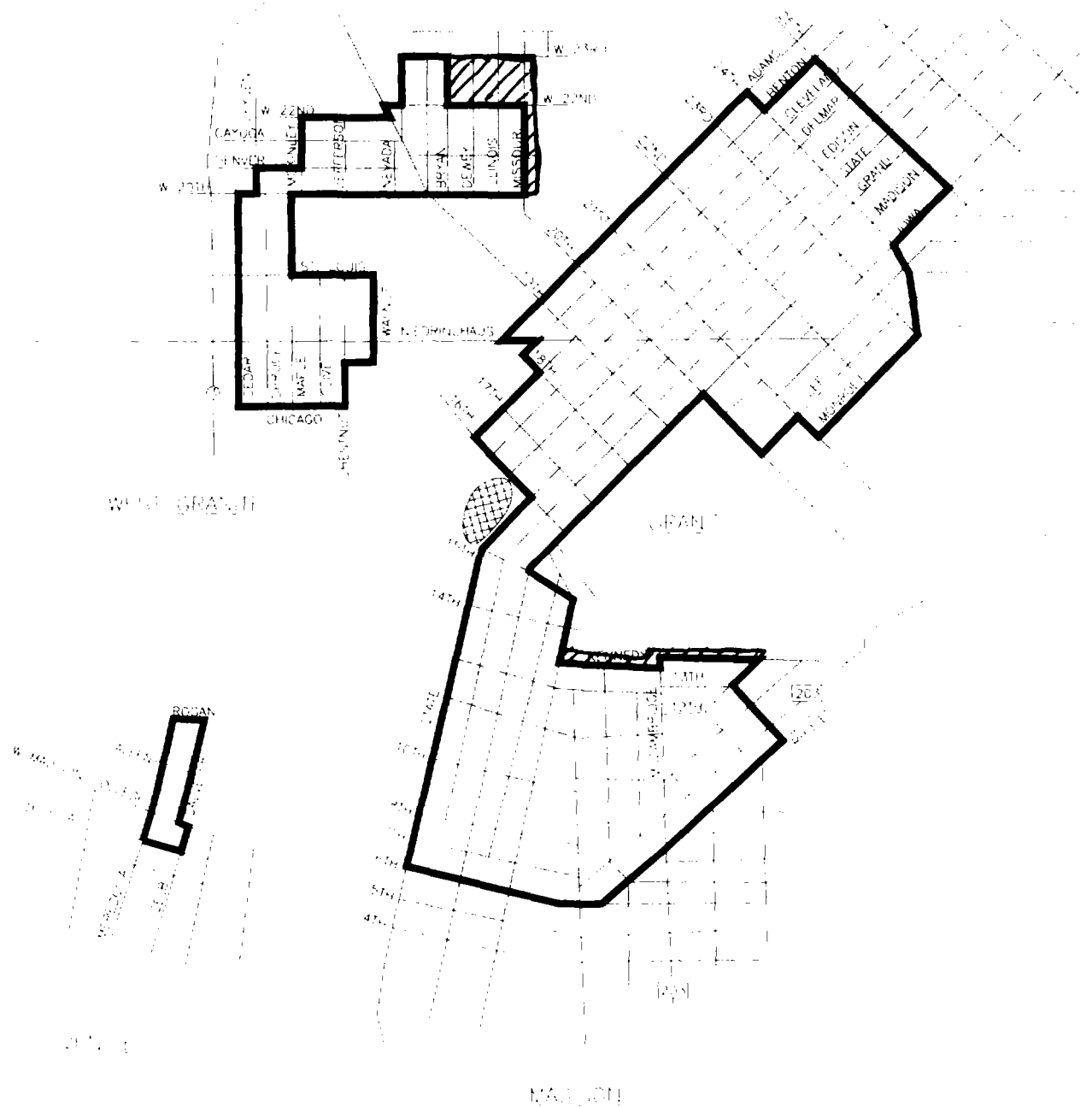
Initially, the Illinois EPA studied the Site due to excessive lead air emissions. In 1983, the Illinois EPA issued a report containing, among other things, wind rose maps for the Granite City area and results of residential yard soil sampling. Based largely on this data, EPA approved an RI/FS Work Plan submitted by NL Industries which contained provisions for sampling a 36-point grid on 1000-foot centers. This grid was laid out with the old NL industrial site as the approximate center point; the grid was skewed slightly to extend further in the northeast, since this was the predominant downwind direction (based on wind rose data). In 1987, NL conducted the grid soil sampling and presented results to EPA in the draft RI Report. Based on the grid sampling data, EPA and Illinois EPA drew contour lines for soil lead contamination zones including contour lines for 2000 parts per million, 1000 parts per million, and 500 parts per million lead. Cost estimates for applicable remedial alternatives were based on these contour maps. EPA issued a Record of Decision (ROD) for the Site in March 1990. A map of the approximate cleanup zone based on the selected residential soil cleanup level of 500 parts per million lead was included in the ROD.

Woodward Clyde Consultants began sampling individual yards in the cleanup zone in 1992. Samples were collected from the center area of both the front and back yards at each residence in order to measure the impact of smelter lead on the yard (as opposed to other sources of lead, such as paint). After results for several hundred yards were reviewed, Woodward-Clyde recommended to EPA that an extent of contamination survey be performed for the Site since results exceeding the cleanup level were common at the perimeter of the initial cleanup zone and several of the areas included in the cleanup were based on limited or, in the case of one area in Madison, possibly anomalous data (note exclusion of one area in Madison that is between two neighboring areas that were in the cleanup zone). EPA obtained access for the extent of contamination study, and Woodward Clyde collected samples from yards in remote (up to two miles away) locations outside of the cleanup zone in each compass direction. The extent of contamination study (titled "Boundary Area Study"), which included statistical analyses of the additional residential sampling data to determine the boundary of the area where contamination from the smelter was expected to exceed 500 parts per million lead, was approved by EPA in 1994. The results of this study indicated that the cleanup zone should be extended approximately two blocks further in all compass directions except the south (Madison). The area that was thus added to the cleanup zone was called the "buffer zone". The buffer zone map is to be included in the Consent Decree with the Generator Defendants as part of an appendix.

EPA has since determined that a three-block area in West Granite City (2200 block of Dewey, Illinois, and Missouri Street) and several residences on the north side of 14th Street between McCambridge and the next cross street to the east should have been included in the buffer zone, and should now be added to the buffer zone. The rationale for adding the three blocks is based on the same criteria as the rest of the cleanup zone: these blocks are an equal distance in the same downwind direction as several blocks that are already included in the buffer zone. The residences on the north side of 14th Street were always in the cleanup zone. Results of sampling that has been conducted at several residences in these additional areas have exceeded 500 parts per million lead. As with other areas in the cleanup zone, based on wind direction and the results of the extent of contamination study, it is expected that these exceedances are primarily due to smelter stack emissions. A map of the approximate boundaries of the cleanup zone for the stack emission residential portion of the Site is enclosed, including these additional areas in West Granite and 14th Street; this map is EPA's best attempt to delineate the cleanup zone, taking into account land use considerations (e.g. rail lines and Granite City Steel are not shown as in the zone only due to the land use). Any residences within the "compass sweep" of the cleanup zone that have not yet been identified and any properties that are deemed by EPA to be a site-related health threat shall be sampled and, as necessary, remediated. The residences on the north side of 14th Street fall within this definition because these lots are within the compass sweep of the cleanup zone.

In the future, if EPA determines that any additional residences should be included in the cleanup zone for stack emission residential lots, the same rationale for inclusion outlined above would be utilized.

Enclosure



— AREA OF CLEAN UP

▨ TAR AND ASPHALT

▨ ADDITIONAL BUFFER ZONE AREAS

0 1 2 3 4 5 6 7 8 9 10
MILES

The map highlights the areas in which residential properties may be tested and cleaned if necessary.